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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,157	04/04/2001	John J. Hart III	E00366/70005 JNA	4012
23628	7590	05/31/2006	EXAMINER	
WOLF GREENFIELD & SACKS, PC FEDERAL RESERVE PLAZA 600 ATLANTIC AVENUE BOSTON, MA 02210-2206				PYZOCHA, MICHAEL J
		ART UNIT		PAPER NUMBER
		2137		

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/826,157	HART ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael Pyzocha	2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 05 May 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 112-117 and 120-146 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 112-117 and 120-146 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

**DETAILED ACTION**

1. Claims 112-117 and 120-146 are pending.
2. Response filed on 05/05/2006 has been received and considered.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 133-139 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 133-139 relate to the arrangement of data on a computer readable medium, which does not constitute statutory material under 35 USC 101.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 112, 115-117, 122-123, 126-146 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moskowitz et al (US 5889868), further in view of Senoh (US 6240121), and further in view of Girod et al (US 5809139).

As per claims 112, 133, 140, Moskowitz et al discloses identifying a plurality of possible placement locations in the title data based on characteristics of the title data; (randomly) selecting a plurality of placement locations from the plurality of possible placement locations (see column 5 line 59 through column 6 line 8; column 7 lines 29-39; column 10 lines 11-14; column 11 lines 22-26 and column 12 lines 19-25).

Moskowitz et al fails to disclose randomly selecting a plurality of number to frequency modulation relationships.

However, Senoh teaches randomly selecting a plurality of number to frequency modulation relationships (see column 2 lines 28-44).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Senoh's method of randomly selecting number to frequency relationships in the method of Moskowitz et al.

Motivation to do so would have been to make it difficult to detect the watermark data (see column 4 lines 31-48).

The modified Moskowitz et al and Senoh system fails to disclose frequency modulating at least portion of the title data at each of the plurality of placement location with a modulation derived by applying one of the plurality of number to frequency modulation relationships to the identification data.

However, Girod et al teaches frequency modulating title data with identification data (see abstract).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Girod et al's method modulating data with the modified Moskowitz et al and Senoh system.

Motivation to do so would have been to allow watermarking of pre-compressed data (see abstract).

As per claim 115-116, the modified Moskowitz et al, Senoh and Girod et al system discloses decoding at least portion of the audio title data (see Senoh column 6 lines 18-26).

As per claims 117 and 144, the modified Moskowitz et al, Senoh and Girod et al system discloses the identifying step includes scanning the audio title data to determine the plurality of locations where one of a frequency deviation between channels of audio title data is less than a predetermined frequency deviation and time intervals within the audio title data for the time-frequency modulating the audio

title data where the time/frequency modulation of the audio title data is not discernible to a human ear (see Moskowitz et al column 9 lines 53-58).

As per claims 122-123, the modified Moskowitz et al, Senoh and Girod et al system discloses encoding watermarked audio title data and combining watermarked title data with the remainder of the audio title data (see Girod et al column 3 lines 1-15).

As per claim 126, 135-136, Official Notice is taken that it would have been obvious at the time of the invention to one skilled in the art to burn a selected medium with the watermarked title data. Motivation to do so would have been to allow for the distribution of the watermarked data.

As per claim 127, the modified Moskowitz et al, Senoh and Girod et al system discloses transmitting the data to a customer (see Girod et al figure 1).

As per claim 128, the modified Moskowitz et al, Senoh and Girod et al system discloses receiving a decryption key and decrypting encrypted title data to provide the title data (see Moskowitz et al column 5 line 59 through column 6 line 8).

As per claim 129, the modified Moskowitz et al, Senoh and Girod et al system discloses the step of decoding encoded title

data to provide the title data (see Girod et al column 3 lines 1-15).

As per claims 130-132, the modified Moskowitz et al, Senoh and Girod et al discloses selecting an entry of a set of relationships (see Senoh column 2 lines 28-44).

As per claim 134, the modified Moskowitz et al, Senoh and Girod et al system discloses the modulated data is not perceptible to a human listener (see Senoh column 4 lines 32-48).

As per claim 137, the modified Moskowitz et al, Senoh and Girod et al system discloses transmitting the data over a network (see Girod et al column 4 lines 35-50).

As per claim 138, the modified Moskowitz et al, Senoh and Girod et al system discloses the plurality of locations are random (see Moskowitz et al column 5 line 59 through column 6 line 8).

As per claim 139, the modified Moskowitz et al, Senoh and Girod et al system discloses the modulation schemes are random (see Senoh column 2 lines 28-44).

As per claims 141-143, the modified Moskowitz et al, Senoh and Girod et al discloses receiving a decryption key and decrypting the encrypted title data to provide the title data (see Girod et al column 3 lines 1-15).

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As per claims 145 and 146, the modified Moskowitz et al, Senoh and Girod et al discloses selecting a plurality of placement locations comprises randomly selecting a subset of the plurality of possible placement locations (see Moskowitz column 5 line 59 through column 6 line 8; column 7 lines 29-39; column 10 lines 11-14; column 11 lines 22-26 and column 12 lines 19-25)

7. Claims 113-114 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Moskowitz et al, Senoh and Girod et al system as applied to claim 112 above, and further in view of Mizikovsky (U.S. 5,748,734).

As per claim 113, the modified Moskowitz et al, Senoh and Girod et al system discloses generating a watermarking key that is a combination of the customer identification data, and the randomly selected frequency modulation and number relationship (see Moskowitz et al column 5 line 59 through column 6 line 8).

The modified Moskowitz et al, Senoh and Girod et al system fails to disclose storing the watermarking key in a secure database.

However, Mizikovsky teaches storing a key in a secure database (see column 7 lines 57-67).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to store the modified

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Moskowitz et al, Senoh and Girod et al system's key in the secure database of Mizikovsky.

Motivation to do so would have been to allow for the verification of the key (see Mizikovsky column 6 line 57 through column 7 line 13).

As per claim 114, the modified Moskowitz et al, Senoh, Girod et al, and Mizikovsky system discloses the step of generation the watermarking key includes generating a unique watermark key for each watermarked title data (see Moskowitz et al column 5 line 59 through column 6 line 8).

8. Claims 120-121 and 125 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Moskowitz et al, Senoh and Girod et al system as applied to claims 112, 117 above, and further in view of Miller (US 6263087).

As per claims 120-121 and 125, the modified Moskowitz et al, Senoh and Girod et al system fails to disclose the use of a reference and watermarked channel and decoding the watermark using the reference channel.

However, Miller teaches such channels (see column 2 lines 15-38).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Miller's channels

in the modified watermarking system of Moskowitz et al, Senoh and Girod et al.

Motivation to do so would have been to use correlations and thresholds to decode the watermark (see column 2 lines 15-38).

9. Claim 124 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Moskowitz et al, Senoh and Girod et al system as applied to claim 116 above, and further in view of Davis et al (US 6611607).

As per claim 124, the modified Moskowitz et al, Senoh and Girod et al system fails to disclose combining the audio and video data together.

However, Davis et al teaches combining audio and video together (see column 1 lines 55 through column 2 line 10).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio of the modified Moskowitz et al, Senoh and Girod et al system with the video of Davis et al. Motivation to do so would have been to control the processing of the combined multimedia signal (see Davis et al column 1 lines 55-65).

***Response to Arguments***

10. Applicant's arguments filed 05/05/2006 have been fully considered but they are not persuasive. Applicant argues the

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rejection of claims 133-139 under 35 USC 101 is not proper; Moskowitz fails to disclose the identifying and selecting steps; Senoh inserts the watermark into an intermediate signal, not the original; Senoh does not teach frequency modulation; and there is no motivation to combine.

With respect to Applicant's argument that the rejection under 35 USC 101 is improper, in which Applicant quotes the MPEP stating, "a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory." The Examiner does not disagree with this statement, but Applicant is directed to MPEP 2106 IV.B.1 that states:

The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When nonfunctional descriptive material is recorded on some computer-readable medium, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make it statutory. Such a result would exalt form over substance.

In the instant case, Applicant's claimed watermark does not qualify as a data structure as described above and is therefore nonfunctional descriptive material, which is non-statutory under 35 USC 101.

With Respect to Applicant's argument that Moskowitz fails to disclose the identifying and selecting steps, Moskowitz describes identifying a plurality of locations in column 5 line 59 through column 6 line 8 and describes randomly selecting a plurality of points in column 7 lines 29-39.

With respect to Applicant's argument that Senoh inserts the watermark into an intermediate signal, not the original, this may be true, however Applicant's claim does not prevent an intermediate step and furthermore Senoh teaches that the method described is, "A watermark method data insertion method for inserting watermark data into an input original signal" (see column 2 lines 28-29). Therefore Senoh does teach inserting data into the original signal, only with an intermediate step, which is not excluded by the claims.

With respect to Applicant's argument that Senoh does not teach frequency modulation, Senoh is not relied upon for teaching frequency modulation, Girod et al teaches frequency modulating title data with identification data (see abstract), as described in the above rejection.

With respect to Applicant's argument that there is no motivation to combine, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Senoh's method of watermarking has the advantage and motivation to use in order to make it difficult to detect the watermark data (see Senoh column 4 lines 31-48) and Girard et al teaches the motivation to use its teachings in order to allow watermarking of pre-compressed data (see Girard abstract).

#### **Conclusion**

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened

statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pyzocha whose telephone number is (571) 272-3875. The examiner can normally be reached on 7:00am - 4:30pm first Fridays of the bi-week off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJP

  
EMMANUEL L. MOISE  
SUPERVISORY PATENT EXAMINER